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THE AVICULTURAL SOCIETY

The Avicultural Society was founded in 1894 for the study of British and foreign birds in the wild and in captivity. The Society is international in character, having members throughout the world.

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FROM THE CHAIRMAN

It is my sad duty to inform you that Peter Stocks, until very recently Secretary/Treasurer, died in early April. He had suffered from heart problems for some years, which was one of the reasons that he wished to hand this post on, which fortunately he was able to do. Our condolences go to Kay, Peter's partner, who shared the work that he did on behalf of the Society. On a happier note, Kate Atwell, who has taken over from Peter, gave birth to a daughter, Indi, shortly after becoming our new treasurer.

I am delighted to announce the launch of the Raymond Sawyer Scholarship. Your Council decided that we would like to use part of the generous legacy left to us by our former President to help develop the skills of younger birdkeepers. We are offering a scholarship on an avicultural course at the Durrell Academy in Jersey, which will be awarded annually to an amateur, professional or student aviculturist under the age of 25 from anywhere in the world. Please see p.183 for further details.

Also in this issue are details of our next social meeting, a garden party at Birdworld in Surrey on June 22nd. We hope that this will be an opportunity for members to meet, for non-members to see what the society has to offer, and of course to look at some interesting birds in pleasant surroundings.

The launch of the scholarship and of student membership has provided opportunities to publicise the society and attract new members, including our first student members. However we still have a lot to do to rebuild membership numbers, and I would ask all members to help with recruitment. Joining the society has never been easier, with many new and renewing members opting to pay subscriptions online, so please spread the word!

We also need your help as ever with material for the new volume of the magazine. This issue relies more heavily than usual on contributions from professionals, so I would say to private keepers in particular, please either exercise your own writing arm or twist someone else's, so that we can maintain the balance that makes the magazine more interesting for everyone.

Nigel Hewston

HEADSTARTING THE CRITICALLY ENDANGERED SPOON-BILLED SANDPIPER IN RUSSIA, 2013

by Roland Digby, Baz Hughes and Nigel Jarrett

Background

Spoon-billed Sandpiper

The Spoon-billed Sandpiper *Eurynorhynchus pygmeus* is one of the most threatened birds on the planet. It breeds on the Chukotsk and Kamchatka peninsulas in the Russian Far East, migrates through Russia, Japan, North Korea, South Korea and China to winter in Bangladesh, Myanmar and Thailand, 8,000km from its breeding grounds.

Its IUCN threat status was upgraded from Vulnerable to Endangered in 2004 and to Critically Endangered in 2008. The species has declined from an estimated 2,000-2,800 breeding pairs in the 1970s to 1,000 pairs in year 2000 to fewer than 100 pairs in 2012, and in recent years the population has been declining at 26% per year. If this trend continues, the species could be extinct in 5-10 years.

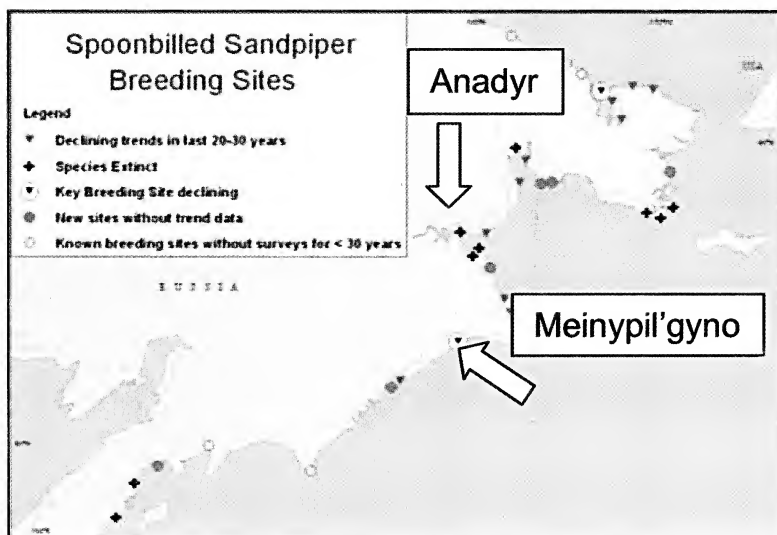
Studies on the breeding grounds have shown that adult survival (76% p.a.) and productivity (about 0.6 young fledge per pair p.a.) are within the bounds of what would be expected for a small arctic-breeding wader species,



Adult Spoon-billed Sandpiper in breeding plumage.



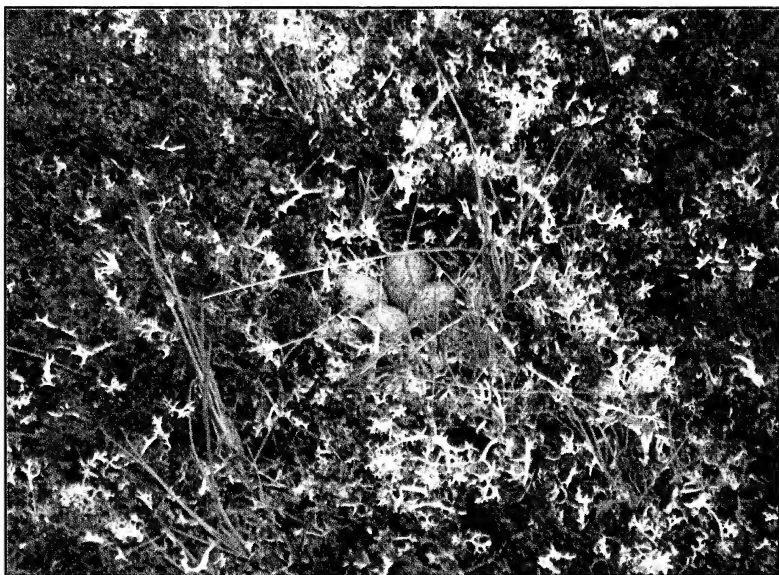
Adult Spoon-billed Sandpiper in breeding plumage.



Location of Anadyr and Meinypil'gyno, Chukotka.



The first Spoon-billed Sandpiper of the year, 30th May.



The first Spoon-billed Sandpiper nest of the year, 11th June.



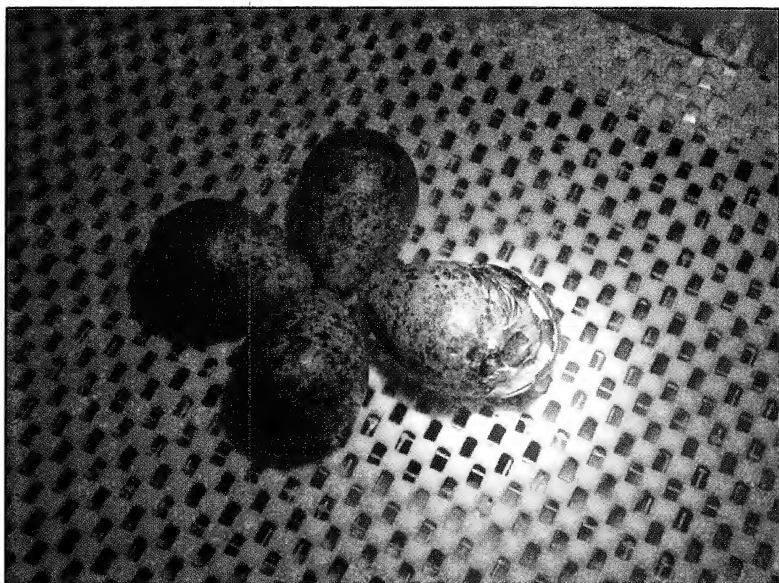
Nikolai Yakushev and Roland Digby collecting the first Spoon-billed Sandpiper clutch, 11th June.

but the proportion of fledged birds that return to breed is very low (0.05 birds recruited per adult p.a.). That is, the current population decline seems to be driven by very high mortality of young birds.

While the species' long-term decline is thought to have been caused mainly by reclamation of inter-tidal staging sites in the Yellow Sea, trapping on the wintering grounds may be a key reason for the recent acceleration in the rate of decline. Young birds remain on their non-breeding grounds for their first two years, and are therefore likely to be more susceptible to trapping.

Efforts so far

Good progress is being made to address trapping mortality, by providing alternative livelihoods to bird trappers whom, in return, sign agreements to cease hunting. Indeed, the coordinator of the East Asian-Australasian Flyway Partnership Spoon-billed Sandpiper Task Force estimates that as many as 80-90% of hunters in the Bay of Martaban, Myanmar (the most important wintering site in the world for Spoon-billed Sandpiper) and all hunters in Bangladesh have now signed agreements to stop hunting and have surrendered their trapping equipment. However, population modelling work has shown that if the cause of the recent decline has been correctly



The first egg hatching, 3rd July.

identified and is indeed winter trapping, and this can be addressed rapidly and effectively (with a halving of winter mortality every five years from 2011) the population will still be at an extremely low level and highly vulnerable to extinction from stochastic effects for more than a decade into the future.

As a result, in 2011, an emergency mission to Russia was carried out to bring Spoon-billed Sandpipers into captivity to create a safety net against extinction in the wild. This was necessary to allow for future augmentation of the wild population with captive-reared juveniles to 'buy time' for conservation action to take effect before the wild population is lost or, if the worst happens and the wild population is lost, to provide birds for reintroduction. Population modelling using the estimated population size and information available on adult survival, productivity and recruitment indicated that taking eggs for conservation breeding would have a negligible effect on the wild population.

For the captive population to be viable more founders were required and for future re-introduction to be feasible, release techniques needed to be tested. Thus, in 2012 another expedition was carried out, again to collect eggs for transport to the UK but also to 'headstart' birds on the tundra.

In this case, headstarting involved extracting eggs from incubating birds, rearing chicks to fledging age at the site, before releasing directly into the



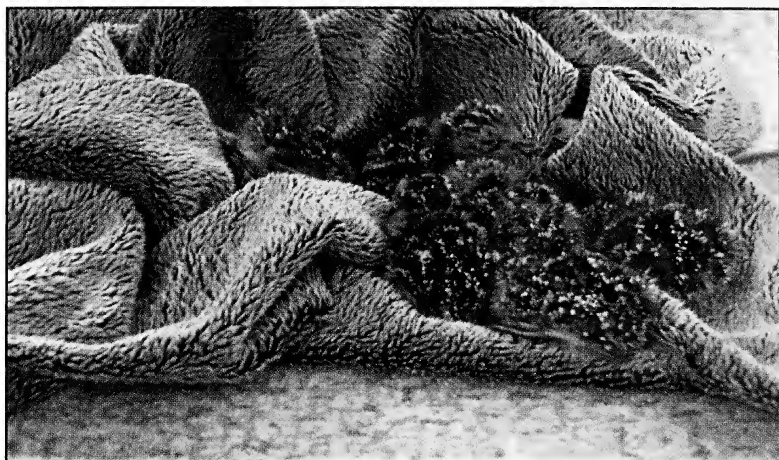
The first chick of 2013.

wild. As well testing release methods, headstarting would increase the number of juveniles produced at the site which holds at least 10% of the world population and allow for the effects of hunting mitigation to be better monitored. Productivity without intervention is ~ 0.6 fledglings per breeding pair p.a. at present. Based on 2011's hand-raising experience, headstarted 4-egg clutches could produce, on average, 3 fledglings per nest. To this 500% increase would be added the fledglings produced by re-laying as females that 'lose' clutches early in the breeding season very often re-lay.

In 2012 headstarting was trialled: 9 Spoon-billed Sandpipers and 5 Red-necked Stints were successfully raised, released and migrated from the breeding area. Many lessons were learned and in 2013, a second expedition was undertaken to headstart more Spoon-billed Sandpipers juveniles. This report summarises the 2013 headstarting expedition.

WWT team member, Roland Digby flew to Moscow on 13th May and, with Russian colleagues, arrived in Anadyr on 15th May. After collecting and checking stored equipment from the 2012 expedition, the team flew by helicopter to Meinypil'gyno arriving on 16th May.

As in 2011 and 2012, the team established their base in rented cottages, one of which was used as the incubation facility. This was cleaned and disinfected before the incubators were set-up and tested. This year, the team had arrived earlier than in previous years and their first challenge was to



The first broods of chicks drying off in the brooder.

extract incubation and chick rearing kit from the still frozen containers.

Once base camp was established the team began surveying the area around Meinypil'gyno for Spoon-billed Sandpipers: an area of approximately 100 square miles – requiring team members to walk about 10 miles each day.

The 2013 team comprised fewer people than in previous years. This meant that the team couldn't cover the ground so quickly. However, on 30th May the first Spoon-billed Sandpiper was spotted (two days earlier than usual, as in 2012) and over the following days the team went on to find more individuals.

In between surveying for Spoon-billed Sandpipers, Roland Digby worked on calibrating incubator thermometers to reliably monitor the ideal incubation temperature of 37.5°C, while Egor Loktionov, helped address some of the overheating issues encountered with the Hemel incubator by connecting an alarm made from an old door bell. This bell sounded when the incubator temperature approached 38°C.

On 2nd June, the first observations were made of Spoon-billed Sandpipers displaying, singing, chasing each other and pairing up on territories.

On 6th June, the first nest was found by Nikolai Yakushev and Nastia Sestnova who had been watching a pair trying out different nest scrapes for two days.

The nest, with just one egg, caused some concern to the team as it was in a very exposed location, compounded by the fact that there was a wolverine hunting in the vicinity.



Fitting a chick with a leg-flag engraved with a unique double letter code at 14 days old.

On 9th June, two team members headed out to survey for Spoon-billed Sandpipers at Ankavia, 12km east of Meinypil'gyno. The team surveyed the far Eastern shore, where two pairs had been found in 2011, covering a distance of 24km, but found nothing. On their return at the end of their survey, a Spoon-billed Sandpiper behaving suspiciously, as if it had a mate close by, was observed 500 metres from where they had parked the ATV.

On 11th June, the first nest now contained a completed clutch of four eggs and the pair had started to incubate. Given the dangers from predation, the team decided to collect these eggs. This was not easy, as not only was the nest in a remote location, but the bridge crossing the river to the nest site had partially collapsed. Despite this, the eggs were collected successfully.

On 13th June, two further complete nests were found. One clutch was collected that evening as it was felt the nest was vulnerable to predation. The unusually warm weather meant that the team had to wait until late in the evening to avoid the risk of the portable incubator overheating. The other more remote, and better concealed, clutch was left for collection later in the week.

On 14th June, Nicky Hiscock (WWT) and Juriy Bragin (Moscow Zoo) arrived by helicopter from Anadyr. These two aviculturists would assist Roland Digby with the artificial incubation and rearing of the Spoon-billed Sandpiper eggs and chicks. This was a great relief to Roland who had almost no sleep for three days since collecting the first clutch of eggs. The same day, two members of the Russian team returned with news that a fourth complete nest had been found. This, like the first nest, was in a very exposed location, so the decision was made to collect it immediately.

With 12 eggs safely in the incubator, it was decided to not collect any more eggs for a further 5 days, the longer natural incubation period would allow for the safer transport of eggs.

Further complete clutches were found on the 15th and 16th June and these with the clutch found on 13th June were collected on the 19th and 20th of June. At this point no more eggs were collected for headstarting.

After each egg collection, dummy eggs were placed in nests allowing the Russian team to trap the adults and mark them with numbered leg-flags and rings, to enable monitoring on the staging and wintering grounds. One trapped female had been previously ringed as a chick. She was 14 years old.

On 21st June a site at the south west corner of Lake Pekulneiskoe was selected as a release site. The release aviary was created in sections at base camp so the team could keep a close eye on artificially incubated eggs at the same time as constructing it. The sections were taken to the release site and assembled just before the chicks were ready to be transferred.

On 3rd July, the first egg hatched. Most went on to hatch in a 26 hour period over the 5th and 6th July. The last egg hatched in the early hours of 8 July and later that morning the sections of pen were moved to the release site. By the afternoon of 9th July, the release aviary was complete and ready to accommodate the first chicks.

Chicks were initially housed in plastic sided rearing units where they were fed a diet of crushed dried insects, commercially produced pellets and live mosquitoes. As the chicks grew, so did the size of the food items they were offered. From three days old they were also given live *Daphnia* and *Cyclops*. The team quickly found out these needed to be offered in very shallow dishes, as in the resulting scrum young chicks could trip over the edges of larger dishes and become wet. The day before the chicks were due to be moved out of the base camp house to the release aviary, they were moved to a slightly larger enclosure on the floor of the rearing room to get used to larger spaces and lower temperatures.

The first brood of chicks was moved to the release aviary on 10 July and by 16 July all chicks had been transferred there. Having the eggs hatch

over a shorter period of time made life much easier for the avicultural team this year, as it meant their time was only split between chicks in base camp and the release aviary for less than a week. The previous year's training of the Russian team and Nicky Hiscock's experience in rearing the 2012 conservation breeding chicks also helped the rearing phase run smoothly.

Once outside the chicks were provided with higher protein and fat dry feed (commercially manufactured pellets). This coincided with the chicks being weaned off artificial heat over a four day period. The team were happy to see that the weights of the chicks were similar to those of wild Spoon-billed Sandpiper chicks of similar ages.

The extra staff also enabled the team to collect plenty of live food from the surrounding pools and the new release site on the marsh held even more mosquitoes than the site selected in 2012. This meant that around 60% of the chick's diet was naturally occurring live food - great for the Spoon-billed Sandpipers, not so much fun for the rearing team collecting the mosquitoes!

On 23rd July a young bear investigated the boundary of the release aviary. It failed to gain entry thanks to the surrounding electric fence and quick thinking team members who drove it away using the ATV while hooting its horn. The improved release site in an even more remote location around the lake meant the team had to be extra vigilant for potential predators, maintaining a round-the-clock presence.

When all birds were present in the release aviary, attention turned to preparing for release, including marking the birds. Birds were fitted with uniquely coded metal leg bands and a white leg-flag engraved with a double letter code.

One of the lessons learnt from the previous year, was that the birds needed to be released much sooner, so that they were ready and able to migrate at the same time as the large flocks of Red-necked Stints *Calidris ruficollis* and Western Sandpipers *Calidris mauri* moving through and stopping to feed on the southern shore of Lake Pekulneiskoe. Given the ease with which the team were able to monitor chicks in 2012 (up until they migrated), it was decided not to attempt to fit the recently fledged chicks with transmitters.

Eighteen chicks made it to the point of release. On 25th July, the first release of birds was made. In total, fourteen birds between 20 and 23 days old were released as a group. The first birds started to leave the pen after twenty minutes. All birds had left within one and a half hours.

On 29th July, the second and final release was made. The door was opened for the remaining four Spoon-billed Sandpipers which were twenty days old. This release proceeded in the same way as the first.

On the first day of release, most Spoon-billed Sandpipers remained close



The chicks aged seven days old inside the release aviary.



Although supplementary food was provided, the young birds foraged for natural food from day one.



A testament to the potential value of headstarting, this male and his mate provided a clutch of eggs for headstarting that resulted in three young birds being released. They also reared and fledged another three young from a replacement clutch – a tenfold increase over the ~ 0.6 chicks per pair fledged under normal conditions.

to the release aviary making a few exploratory flights but returning to feed on mosquitoes in the surrounding marsh, and to a lesser degree than in 2012, on the supplementary feed provided.

It quickly became apparent, that the supplementary feed being provided was hardly being taken by the birds, so one day after the second release date it was withdrawn. The birds continued to feed around the release site, mixing well with flocks of Western Sandpipers, Red-necked Stints and Dunlin *Calidris alpina*. All but two of the birds had departed by 8th August. The last two were last seen on 11th August, at the peak of the wader migration.

Status of the Spoon-billed Sandpiper Population at Meinypil'gyno

In summer 2013, a team led by Nikolai Yakushev, Pavel Tomkovich and Egor Loktionov conducted surveys for breeding Spoon-billed Sandpiper around Meinypil'gyno, with support from the headstarting project team. With three ATVs and a rubber motorboat, the team were able to access more remote areas than in previous years.

The weather conditions during summer 2013 were generally favourable for nesting birds, with a very warm period at the beginning of June. July

was wetter than usual and there were two periods of heavy rain between 13-14 July and 3-4 August. Although snow cover was similar to previous years, rivers did not flood at the time of the thaw and so breeding territories were not inundated as in 2011.

Table 1. Numbers of confirmed (and possible) breeding pairs of Spoon-billed Sandpipers in the three sections of the monitoring area at Meinypil'gyno in 2009 - 2013.

Year	Western section	Central section	Eastern section	Total
2009	2(+2)	5(+2)	1(+1)	8(+5)
2010	1	9	2(+1)	12(+1)
2011	0	7(+2)	2(+1)	9(+3)
2012	2	3(+1)	4(+1)	9(+2)
2013	1	5(+1)	3(+1)	9(+2)

Note: survey effort and coverage varies between years.

The Spoon-billed Sandpiper breeding population in the monitoring area was estimated at 9-11 pairs (Table 1). A total of eight pairs were found with nests and one pair with chicks. Another bird was seen behaving as if it had a nest or chicks and a 'heavy' (i.e. probably egg-laying) female was also recorded. In the last three years there has been an apparent stabilisation of the population around Meinypil'gyno with no unpaired males as were observed in 2012, suggesting there is recruitment to the population. At least five pairs were known to have nested to the west of the survey area and at least one pair to the east of it.

Plans for 2014

Another expedition will be mounted to Chukotka in 2014. Assuming there are sufficient nests and eggs found, we plan to headstart another cohort of Spoon-billed Sandpipers. This would again comprise taking eggs from incubating birds and raising chicks to fledging age at Meinypil'gyno, before release back into the wild.

This would be undertaken for the same reasons as in 2013:

Firstly, headstarting would provide a relatively large boost to the numbers of juveniles produced at Meinypil'gyno, a site which holds at least 10% of the world population. Productivity is ~0.6 fledglings per breeding pair at present as predation from species such as skuas, stoats and American Ground Squirrels is currently very high. Headstarted 4-egg clutches are again likely to lead to at least 3 fledglings per nest based on 2011, 2012 and 2013 experience. To this 500% increase would be added the fledglings produced

by re-laying as females that 'lose' clutches early in the breeding season can re-lay (at least one female was known to have re-laid and successfully reared chicks in 2011, at least one female re-laid in 2012 and four in 2013).

Secondly, hunting mitigation in Myanmar and Bangladesh is showing significant progress. Juvenile survival may already be starting to recover and in a small number of years this recovery could be significant. Increasing the number of fledglings will become increasingly valuable, as it can increase the rate at which the population stabilises and recovers. Continuing headstarting means we will not miss the opportunity to accelerate recovery.

Thirdly, the Spoon-billed Sandpiper is a difficult bird to monitor throughout the flyway so it will not be easy to determine the point at which juvenile survival starts to recover. Releasing a significant number of leg-flagged fledglings will enable us to detect increases in recruitment at Meinypil'gyno in future years, allowing us to monitor the effectiveness of conservation actions on the non-breeding grounds and adjust conservation strategies accordingly.

Acknowledgements

The Spoon-billed Sandpiper conservation breeding and headstarting programme is a collaboration between WWT, Birds Russia, Moscow Zoo and the RSPB working with colleagues from the BTO, BirdLife International, ArcCona and the Spoon-billed Sandpiper Task Force.

The programme is funded mainly by the IUCN Save Our Species Fund, the UK Darwin Initiative, RSPB and WWT with additional financial contributions and support from BirdLife International, the East-Asian Australasian Flyway Partnership, the Convention on Migratory Species, Heritage Expeditions, the Australasian Wader Study Group of Birds Australia, the BBC Wildlife Fund, Avios, the Olive Herbert Charitable Trust, the Oriental Bird Club, British Airways Communities & Conservation Scheme, New Zealand Department of Conservation, the Queensland Wader Study Group, New South Wales Wader Study Group, Chester Zoo and many generous individuals. Leica Camera AG is WWT's exclusive optic partner for this project.

The authors are Baz Hughes who is the Head of Species Conservation Dept, Nigel Jarrett who is the Head of Conservation Breeding Unit and Roland Digby who is a Conservation Breeding Officer. A footnote to this article will appear in the next issue.

NEWS FROM LORO PARQUE FUNDACIÓN SEPTEMBER 2013

by Dr. Matthias Reinschmidt

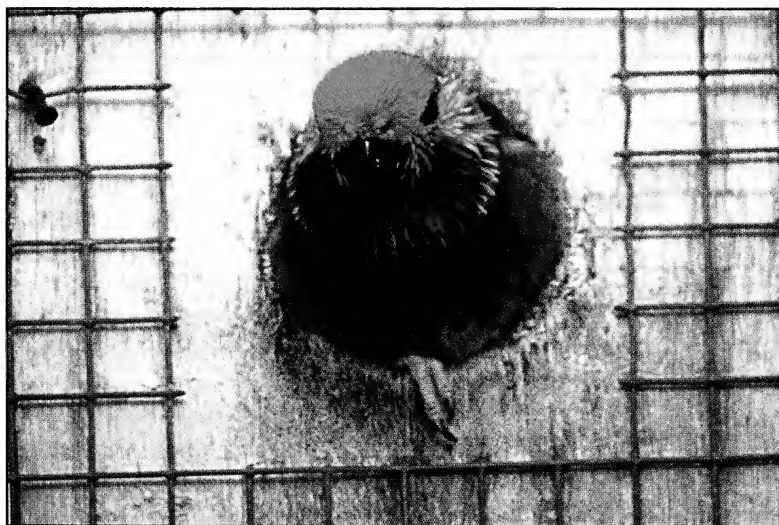
It is the autumn and so the breeding activities are slowing down, but there are still some pairs incubating eggs or rearing young.



Yucatan Amazons *Amazona xantholora*.



Pair of Edward's Fig Parrot *Psittaculirostris edwardsii*.



Edward's Fig Parrot emerging from the nest.

We are very pleased about two young Ouvea parakeets *Eunymphicus uvaeensis*. The female incubated three eggs and the two chicks which hatched are now reared to juveniles that have now been ringed. So we hope that both will fledge in a few weeks and will increase slightly our small population of this species.

Currently, a pair of Edward's Fig Parrot *Psittaculirostris edwardsii* is rearing two chicks that have also been ringed. This food specialist, as its name suggests, eats figs, and is now among the very rarely held parrot species that few parrot specialists breed in their collections. As such, all offspring are important in order to maintain them long term in captivity.

The last latecomers among the Amazons are this year two Yucatan Amazons *Amazona xantholora*, also now ringed. The genus *Amazona* is in the LPF very seasonal, the first eggs being laid in February, and usually by July or August they are all finished. The Yucatan Amazons laid again at the end of the season in August, and two chicks hatched, that are now being well cared-for by their parents.

There are also still some young in the nests of the large macaw species. The macaws tend to be in better breeding condition in the second half of the year. Currently, two young Great Green Macaws *Ara ambiguus* are being reared by the parents, and are already ringed. There are also two chicks in the nest of the Chestnut-fronted Macaw *Ara severus*, cared-for perfectly by the experienced parents.

In late August we had already started the stock control of our birds. This means that every year, after the breeding season, each bird is caught-up in the aviary, blood samples for all common virus tests, pharyngeal and cloacal swabs are taken, the body weight is recorded and the general plumage conditions are checked. This has given us over the years an excellent overview of the health status of each bird, and emphasises our high standards. The stock control usually ends in December when the veterinarians, together with the curator and the chief keepers, have checked the entire installations in the breeding station and in Loro Parque itself. With nearly 4,000 parrots this is a big undertaking.

HELPING THE GOLDEN-PLUMED PARAKEET

by Dr. David Waugh

The Golden-plumed Parakeet *Leptosittaca branick* is found in Colombia, Ecuador and Peru, mainly in Andean Cloud Forest between 2,400 and 3,500m above sea level. In the Central Andes of Colombia, the LPF has for the last decade supported studies on its ecology and a programme for its conservation implemented by Fundación ProAves. The conservation effort is focused on two protected areas, the 2,035 hectares El Mirador Municipal Reserve and the 657 hectares Fuertes's Parrot Natural Bird Reserve. Within these areas the species is sparsely distributed, an average of 20 birds being counted on each survey at the beginning of 2013. The successful campaign of ProAves in Colombia, related to conservation of the Yellow-eared Parrot *Ognorhynchus icterotis* and wax palms *Ceroxylon* sp., has also been beneficial for other palms and Golden-plumed Parakeets.

However, overall in Colombia and Ecuador the population of the Golden-plumed Parakeet has declined significantly, mainly due to loss of habitat, and it is a threatened species classified by the IUCN as vulnerable to extinction. In Ecuador it is reported from the northern and eastern Andes, south to the eastern Andes of northern Peru. In fact, the 146,280 hectares Podocarpus National Park and the 700 hectares Tapichalaca Reserve of Fundación Jocotoco located in the south of Ecuador are the only places in the country that protect the habitat of this species. The parakeets nest mainly in natural cavities made by woodpeckers, but in 2008 the Loro Parque Fundación supported a project of Ecuadorean biologist Mery Juiña to install some artificial nests in Tapichalaca Reserve, to discover more about the reproductive biology of this species.

The artificial nests were successful, but there is still a need for better understanding of the population status, reproductive biology and ecological needs elsewhere within its geographical distribution in Ecuador. Therefore, the Loro Parque Fundación is now supporting Mery Juiña, in collaboration with the Yanayacu Biological Station, to contribute to the existing knowledge of the species further north in Ecuador, including to assess the current population and study reproductive biology. This also involves detecting nesting sites and installing artificial nests where natural cavities are scarce. For conservation measures, the key areas and main problems must be identified, as well as the socio-economic concerns of the inhabitants of the region.

To date Mery has visited 16 sites, and in eight the presence of Golden-plumed Parakeets was determined by observation and hearing their calls,



Golden-plumed Parakeet *Leptosittaca branicki*.

while in two other sites their presence noted in previous years was confirmed. Six sites had no evidence of the presence of the parakeets. However, in the towns of the northern sector of the east Andes there is good evidence of wax palms recovering naturally and occasionally it is possible to observe adult palms. Local people in this region comment that more or less 30 years ago there was a large increase in wax palms and they often saw parakeets. A key site, in Community of La Libertad, has been identified for placing the first 20 artificial nests and to conduct monitoring and population census.

Further north, in the Carchi and Imbabura provinces of Ecuador, Mery has made the first observations and field survey. Here the local governments have shown interest in the project, especially in regard to environmental awareness, which has been an activity of the Ministry of Environment of Ecuador in the past two years. It is worth noting that the wider community is aware of the removal of the palms or their fronds. For confirmation, Mery has visited two of the most popular churches of Quito during Palm Sunday and seen the use of palm fronds. However, traders sell the palm fronds clandestinely, knowing the prohibition of sale and its risks, even though there was no obvious police control outside the churches. Thus, it is clear that more conservation actions are needed for the Golden-plumed Parakeet, and this project is responding to these needs.

FREE LOFTING VERSUS TETHERING FOR BIRDS USED IN DEMONSTRATIONS

by Lucy Smith

Traditionally free flight birds, either those used for falconry or for demonstrations, have been kept by employing the practice of tethering. When they are not flying it is normal to attach them by means of a leash to a perch of some kind. Free lofting is just the opposite. In free lofting the bird, when not working, is free to fly within its aviary.

Tethering has been successfully employed by falconers for hundreds of years. In these situations, birds may fly for prolonged periods of time over great distances. However, at ZSL London Zoo we do not practice falconry as it is commonly understood. Our birds fly once a day in a demonstration and are therefore able to fly free for just 10 minutes. We discussed and agreed to trial an option which afforded free flight birds the choice to move around freely within an aviary and to see whether or not former practices (i.e. the immobilising of birds unless they were in use) could be challenged in the case of demonstration birds. We have practiced these techniques for non-raptor species, vultures and caracaras and thought it would be beneficial expanding what we had learnt to include other species.

We are currently working towards free lofting all of our demonstration birds and have achieved this with 12 out of our 13 raptors.

Getting started

We had to have the right aviaries in terms of size, design and location for this to be achievable. These were constructed at the periphery of our display lawn where the birds are flown. Each aviary had a release hatch allowing the bird to be flown directly from the aviary into the display. As we weigh our birds daily to make sure they are flying at their optimum weight (too heavy and they are not motivated to fly, too light and they could be under-condition) we added a weighing station inside, previously the birds would have had to be carried out into the corridor to be weighed. The addition of a weighing station made the daily weighing much easier.

The benefits of this design for the management of display birds are multiple. We did not have to collect birds from far away aviaries for demonstrations, thus greatly reducing the time they spent in boxes; neither did we have to remove them from their aviaries for weighing. This meant that the bird would not have to be pursued but could rather choose to engage with us on its own terms creating a much more positive working environment. The birds could be encouraged to fly to us by using positive

reinforcement techniques. Being centred in one area also reduced the need for vehicle movement on site which is both safer and a reduction of our carbon footprint.

When we began the free lofting process of our birds it was very much a case of letting them free in their aviary and hope that they respond to the food we were offering them. Most of the birds would fly directly out of their aviaries to begin their routines in a demonstration, but some still needed to be transported by carry case. On these occasions we would fly the bird directly down to our glove for a bit of food in their aviaries and then let them fly into their box for another piece of food. As you will hear, different birds reacted in different ways to this procedure and we found ourselves adapting our techniques to accommodate the birds.

Harris Hawks

At London Zoo we had three male Harris Hawks which, until we first free lofted them five years ago, were tethered during the summer flying months and free lofted over winter during their moult. They were all of a similar age, in similarly designed aviaries, and all had been trained using traditional falconry techniques. However they all reacted very differently to the same free lofting protocol.

Bud – was eager to fly to us from his aviary during the free lofting process, so much so that he would be waiting at the door to be weighed in the mornings and to be boxed for demonstrations. Waiting on the gravel could lead to foot problems and we did not want to pick him up from the doorway as it could have led to a situation where he escaped into the corridor.

Harry – enjoyed being in his aviary so much that he often would not come to the handler which presented problems for weighing and often for demonstrations. On two days out of seven he would not come to a demonstration at all.

Mac – took to free lofting well but would often not fly to the glove when we went to collect him, and had to be flown directly into his box to be taken to demonstrations.

Common Buzzard

Our Common Buzzard was tethered during the initial training period and after the first season we put her into free lofting to moult. We found that during this period she would still step up onto the glove. We could attribute this to the significant training work we did with her making her completely at ease with her handlers. It is also relevant that this is a crèche reared bird and subsequently more socialised towards us than a parent reared individual would be.

Chilean Buzzard Eagle

We found our Chilean Buzzard Eagle also took very well to free lofting after the initial tethering period; in fact he took very well to all training procedures and was always a very calm bird. This bird was a product of double clutching and had undergone some hand rearing before being returned to its parents, so was partially imprinted, which made the situation much easier. However, he is now in an aviary with limited handling or contact during his moulting period. This is in order to try to discourage the juvenile behaviour that is common with hand-reared birds. If left unchecked it can result in a permanent infantile response. We will evaluate how the free lofting works out for him next season.

Although the partial imprinting of these two birds has helped us with the free lofting procedure, I must stress that we do not recommend imprinting a buzzard, falcon or eagle species as this can lead to aggression, gripping the glove and continual vocalisation in these birds.

Overcoming challenges

One of the significant challenges that we incurred was with our Harris Hawks. These, we found, would require so much food during the winter months to keep their weight up, due to a combination of the cold weather and an increased period of activity in the aviary, that they were not motivated to come to us at all. This problem eventually diminished when they got used to the freedom their aviary provided and their levels of activity reduced.

We found that with every new problem that arose, we had to be flexible and adapt our procedure. Below is a list of challenges that we faced and how we overcame them.

- In the case of birds waiting at the door to be collected, we station trained them to a perch and always collected them from there instead of the ground. If they were ever waiting on the ground we would always point them to the same perch until eventually they would end up waiting there for us instead.

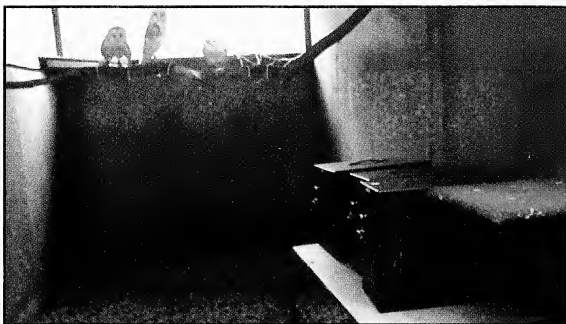
- We also had incidents of birds flying at doors when we came to collect them. So, with most of our birds now we take the boxes into the enclosure and box them there, to try and curb their fixation with the door.

- With some of our birds we have the boxes permanently inside their enclosure so they become part of the furniture and we are not bringing in a novel item in that could frighten the bird. It also saves the hassle of moving the boxes and reduces the risk of birds escaping through a widely opened door.

- We made sure that the perches for most of the birds were ones that we could reach to make it easier for the birds to step up onto the glove if they



Our Common Buzzard was stationed trained to stop her waiting at the door.



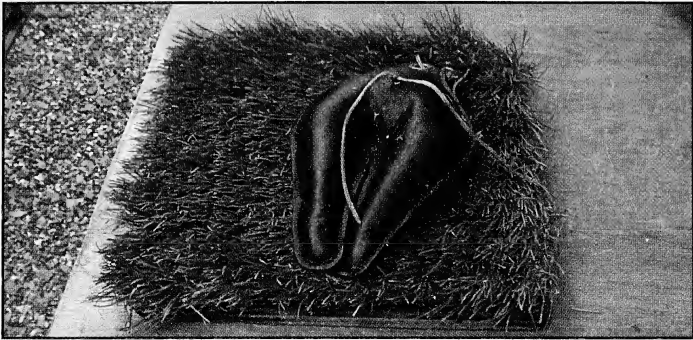
We keep our Barn Owl boxes permanently inside their aviary.

preferred to do so.

- With some birds we had to call them to a perch before calling them to the glove.
- We use distraction methods to keep our birds' attention whilst handling them inside their aviaries rather than taking hold of the jesses (leather leg straps).
- All our birds are weighed on weighing platforms inside their enclosure as opposed to out in the corridor as we used to do. This again negates the need to take hold of jesses.

Adaptability really is the key to finding a method that works for you and your bird, but when you find something that works make sure you are consistent with your methods, that way the bird always knows what is expected.

When working free lofted birds it must be noted that a mutual level of trust must exist between bird and handler. A bird that has been flying free in an



The lure that we used to bring the Kestrel to its weighing station.

aviary is more likely to come down to a handler if it has had mostly positive experiences when doing so. Issues that can add to that trust are how secure they feel on the glove of the handler or knowing they will always get food when they come to the glove or box. Things that can destroy that trust are long periods of time spent in boxes, or the restriction of having their jesses taken, particularly in the case of free lofted birds as they have not had that feeling of restriction on their feet reinforced. We try not to take hold of the jesses in situations unless it compromises the safety of the bird or handler, this means that if a bird was ever to bait (attempt to fly away) it would not associate that negative feeling of restriction with the handler. However we would always take the jesses at the end of a routine when either the bird has a full crop, or to restrain it if it had previously flown off. The design of our new aviaries with release hatches and inside weighing stations allows us that freedom of choice.

Future projects - Free lofting a Common Kestrel

We have been lucky in that the majority of birds we have managed to free loft are hand reared (owls) or imprinted to a degree (buzzards). Or as in the case of our Harris Hawk, which is a social bird anyway, have worked with us for so long that a good amount of trust has been placed in us as the handlers.

The final demonstration bird of our collection that has yet to be free lofted is a parent reared Common Kestrel. These are very sensitive birds with brittle feathers, which if the bird is frightened could easily be damaged, thus rendering them unable to fly in demonstrations.

He is currently free lofted for his winter moult, but we want to keep him free lofted throughout the flying season as well. During the winter period with

optimal food he goes back to being almost completely wild and as summer approaches we need to drop his weight down. We will need to find a way to weigh him daily and pick him up ready for demonstrations.

As he does not fly glove to glove in demonstrations but is very focussed on flying to a lure, we decided to create the above device, a lure attached to an astro turfed board.

Our plan

Throughout the winter months we will feed him exclusively on this lure placed on his weighing station inside his aviary. This acts as a target that he will always fly down to for food. As the summer months approach and we start reducing his food, we can place the scales under the lure and check his weight from outside the aviary. We hypothesise that as his weight decreases and he becomes more food motivated we will be able to move inside the aviary with him and eventually move to trading him off the lure for a piece of food.

We trialled this with some success when he first entered his free lofting aviary directly after the summer season when he was still at his flying weight, however, it is uncertain whether he will be as responsive after the winter months and a period of minimal contact. We will have to wait and see.

Conclusions

When a bird is first put into free lofting, the handler does have to be adaptable; try a multitude of permutations of your original protocol until you have discovered what works for you and your bird. You may have to think inventively but when you have found what works for you, be consistent. The beginning stages may be time consuming, but what may start out as time consuming can ultimately save time in the long run.

If you were to ask the question "Can we train raptor species without the need for tethering"? The answer would be "it depends upon the bird or the species, but for many the answer would be no". Tethering is often essential during the early stages of working with most raptor species, owls being one of the exceptions. Tethering can speed up the training process as the bird is learns to accept the prevailing conditions much faster than training a parent reared bird in a free lofted environment, thus reducing the length of time the bird is stressed at the trainer's presence.

After this period we should be looking towards free lofting. As handlers we have a responsibility to offer the bird maximum freedom of choice. We need to ask ourselves the question, are our birds coming to us because they want to, or because they have to?

BREEDING AND HAND-REARING OF BLACK PALM COCKATOOS *Probosciger aterrimus* AT THE JURONG BIRD PARK SINGAPORE

by John Sha

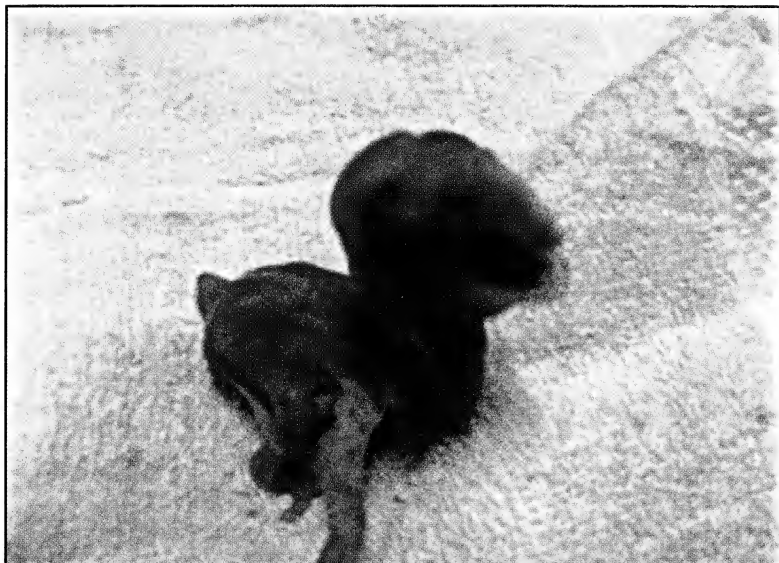
Introduction

The Black Palm Cockatoo *Probosciger aterrimus* belongs to the family Cacatuidae and the order Psittaciformes. There are three recognized subspecies: *P. a. aterrimus*, *P. a. goliath*, and *P. a. stenolophus* (Schubot et al., 1992). The Black Palm Cockatoo is listed under CITES Appendix I (UNEP-WCMC, 2012) and is considered to be of least concern on the IUCN Red List although the population is believed to be declining (IUCN, 2012).

Black Palm Cockatoos are distributed throughout the Northern Cape York Peninsula, Queensland, Australia, from Pormpuraaw in the north, to Saltwater Creek in the west, and Princess Charlotte Bay in the east (Garnett et al., 2010). The birds thrive in woodlands but can also be found in closed forests. Breeding adults nest in hollow trees such as eucalyptus, and the nests are aggressively defended (Garnett et al., 2010). They have an unconventional courtship display, where the males use sticks to hit the tree trunk repeatedly to attract females (Wood, 1984).

Black Palm Cockatoos are known to have a relatively low rate of reproduction, compared to other species of Psittaciformes in the wild (Murphy et al., 2003). Females only lay a single egg per clutch and in the wild were observed to only produce a clutch every 2.2 years (Murphy et al., 2003). Due to the long egg-laying interval, destruction of nests by forest fires, and predation of eggs and chicks, wild Black Palm Cockatoos have a mean of only 0.11 fledglings per pair of adults per year. (Murphy et al., 2003). Black Palm Cockatoos in captivity lay eggs more frequently than their wild counterparts.

The Jurong Bird Park successfully hand-reared a Black Palm Cockatoo in the year 2000. Two eggs had hatched after incubation by foster breeding adults, but only one chick survived (Lim and Khin, 2000). In 2012, a breeding pair produced four clutches of eggs. The clutches were laid at intervals of approximately two weeks. The chicks were hatched using artificial incubation and were hand-raised by aviculture caretakers at the Breeding and Research Centre.

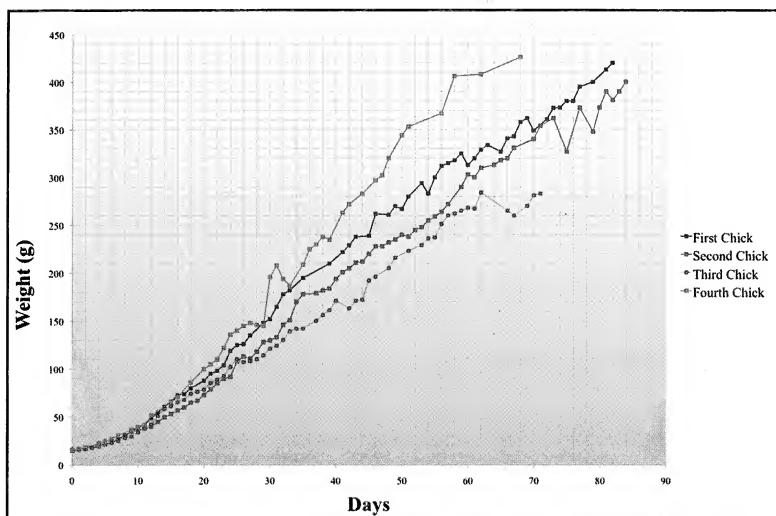


Fourth chick at two days old.



Third chick at 23 days old, second chick at 46 days old and the first chick at 81 days old.

Figure 1. Daily weights of Black Palm Cockatoo chicks.



Breeding adults

The pair of breeding adults was housed at the breeding blocks in BRC. They were kept in an aviary measuring 2.2m high x 1.8m wide and 4.5m long. Logs were provided as enrichment. The nest box was made of a hollow logs partially filled with sawdust. During the non-breeding season, the adult birds were fed twice a day. During the breeding season they were fed three times a day, at 3 to 4-hour intervals. The increase in the frequency of feeding stimulates mating and reproduction. In the morning, they were fed a salad of fruits and vegetables; while in the afternoon, they were given seeds and nuts. Sufficient clean water was also provided.

Incubation and Hatching

Four eggs were laid on 26th April, 2nd June, 24th June, and 27th July 2012 respectively. The freshly-laid eggs were taken out of the nest boxes and artificially incubated. They were incubated for 30-31 days, at 35.5 – 36°C and 40 – 45% humidity. The eggs were automatically turned in the incubator. Egg candling revealed that all the eggs were fertile and were developing normally. All four chicks were hatched by assisted hatching. When the eggs first pipped, they remained in the incubators for 24 hours. After 24-28 hours, the shells were peeled slightly if no further pipping was observed. The eggs were left alone in the incubator for another 24 hours. The shells were then

manually peeled if the chicks were not successful in breaking out of the shell. The pip-to-hatch interval was approximately 96 hours. The chicks were hatched on 26th May, 2nd Jul, 23rd Jul and 26th Aug 2012.

Hand-rearing

The chicks were placed in brooders set to 35°C and 60-65% humidity. The brooders were kept in air-conditioned nursery rooms, with temperatures set at approximately 22-24°C. At the first feeding, the chicks were given Hartmann Solution at 10% of their body weight. Subsequently, they were fed eight times a day, at two-hour intervals, for 10 days. After 10 days, the feeding frequency was reduced to seven times a day. When the chicks were 20 days old, they were fed six times a day. The chicks were first fed at 6-7am and last fed at 7-8pm every day. They were given a home-made diet consisting of blended carrots, apples, broccoli, peanut butter, Nektonn®-MSA powder and Kaytee exact Hand Feeding Formula. The exact measurement of each ingredient is listed in Table 2. After blending, the diet was stored in the freezer until they were consumed. During feeding time, the diet was thawed and warmed to 40-45°C. Disinfected syringes were used to hand-feed the chicks. The chicks were fed 10-15% of their body weight at each feed.

The chicks were transferred into separate weaning aviaries once they were fully feathered (68 to 84 days of age). The weaning aviary was kept at room temperature of 27°C and humidity 40%. They were hand fed with the blended diet three times a day, but were also introduced to solid food. Gradually, as the chicks learnt how to eat the food provided, the frequency of hand-feeding was reduced to twice a day. Vegetables were given in the morning, while fruits, seeds and pellets were given in the afternoon. Sufficient clean water was also provided in the cages.

Physical development of the black-palm cockatoos

The physical development of the chicks was monitored (Figure 1 and Table 1). The chicks were weighed every morning, before the first feeding commenced. From day 0 to day 15, all four chicks grew at similar rates. The appearance of the chicks at different stages of development is shown in the photographs (p. 172).

Table 1.Observed physical characteristics of the chicks at various ages.

Age (Days)	Observations
0	Blind Featherless The whole body, inc. the beak and the feet were pink The claws were white
8-10	Egg tooth was not visible Eyes started to open (eye slits visible), White pin feathers started to develop on the back
14	Both eyes were opened Black pinning on both wings
18-19	Black pin feathers on both wings and on the back were more prominent Black pigmentation developed in the digits and in between the nostrils
22	Black pin feathers started to develop on the head (in between the eyes, back of the head, and at the sides of the lower mandible) Black pigmentation developed in the toenails Both feet turned light-grey
24-26	Pin feathers on the head extended to the back Primary feathers were growing Black pin feathers started to develop on the legs The colour of both feet became darker
29-33	Upper beak turned light-grey Both wings were covered with pin feathers. Tail feathers began to develop
41-44	Top and back of head were covered with pin feathers Back and wings were completely covered with pin feathers
51-52	Upper beak turned black Lower beak turned grey Cheek patches became reddish Feathers were more developed Both feet and toenails became black
60	Fully feathered
66	Cheeks were more reddish Stripes of white feathers below the abdomen were visible

Table 2. Ingredients and respective measurements used for 250ml of Black Palm cockatoo hand-feeding diet.

Ingredient	Volume/Weight
Apple	40g
Broccoli	40g
Carrot	27g
Kaytee exact Hand Feeding Formula	70g
Nektonn-MSA Powder	2.5g
Peanut Butter	1 tablespoon
Water	250ml

Conclusion

There have been marked improvements in the breeding and survival of Black Palm Cockatoos at the Jurong Bird Park in recent years. This could be attributed to the implementation of the new feeding regime for the breeding adults, improvements in artificial incubation and hand-rearing techniques as well as general diet management and monitoring.

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AVICULTURAL SOCIETY SPRING SOCIAL MEETING AT PAIGNTON ZOO

by Philip Schofield

Originating as the private collection, later opened to the public, of Herbert Whitley, Paignton Zoo has grown and changed over more than half a century since his death, but remains one of the UK's most impressive zoological collections. Some idea of its past, and the changes over the years, can be gleaned from a series of articles by Dr Emilius Hopkinson in the Magazine for 1931.

Some thirty members attended the meeting on 27 April, most of whom joined the afternoon tour of the collection, with Senior Bird Keeper Peter Smallbones.

I will attempt to describe some of the highlights of the collection, with apologies for omissions and any lapses in memory.

Before one even enters the zoo, a substantial colony of Chilean Flamingos can be seen, as the Zoo's 'shop window' to the outside world. Inside the Zoo, the first major walk-in enclosure is the Brookside Aviary. This well planted enclosure holds Black-necked Swans, Sacred Ibis, Madagascar Teal and Speckled Pigeons among other species. The height of the enclosure and the amount of vegetation make this aviary a bit like watching wild birds; sometimes one needs to sit still and see what appears. There has been a breeding population of Azure-winged Magpies in here for some years, but they were not in evidence on this occasion. The very natural-looking pond in this aviary is part of the same system as the main lake and the flamingo pond, all of which carry a lot of red suspended particles of red Devon earth. This can stain the white plumage of birds like the swans, but seems to have no other adverse effect.

At the end of this aviary is a window into the Asian Lions' enclosure. Lion taxonomy is debatable, but there is at least general agreement that Asian and African lions are distinct sub species. So Asian lions are distinguished from the African race by the fold of skin along the belly; the tail tuft is also said to be larger. This may be the race that occurred as far west as Iraq during the twentieth century. The Asian lions at Paignton have bred well over the years, and have produced a litter since our visit.

Leaving the Brookside aviary and heading uphill, the visitor enters a wooded area with Southern Cassowaries on the right and owl aviaries on the left. Cassowaries have bred well here over the years, but are currently reduced to three males. With their casqued heads, dagger-like inside claws and general air of menace, there is something of the popular concept of

a Velociraptor about them. Jo Gregson (Paignton's Curator of birds) has suggested something similar in this journal. Essentially forest birds, they look and do well in this setting. Opposite the Cassowaries are tall netted aviaries containing Eurasian Eagle Owls, Ural Owls and Great Grey Owls, again well suited to their surroundings.

Moving on past the pair of Sumatran Tigers, one comes to the Avian Breeding Centre, a complex of on and off-show aviaries with indoor holding areas, incubation and rearing rooms. Around the aviaries were free ranging Golden Pheasants which apparently maintain their numbers here, as do the far more numerous and long established Peafowl, although the Red Junglefowl that roamed the Zoo for many years have died out.

In the aviaries we saw last year's young Toco Toucan, now separated from its parents who were preparing to nest again, a young Hooded Pitta being hand-reared, Green-crested Touraco, breeding Southern Screamers [also the subject of an article by Jo Gregson) and some very vociferous Grey-winged Trumpeters. Hornbills here included Papuan Wreathed, Abyssinian Ground, and a second generation of captive bred Wrinkled.

Parrots were represented by Blue-throated, Red-fronted and Hyacinthine Macaws, Red Lories and Queen of Bavaria's (Golden) Conures. Waterfowl in the aviaries included Freckled Duck and the critically endangered) and often overlooked by waterfowl keepers) Baer's Pochard.

Excellent Lady Amherst's Pheasants were also here, with long high arched tails. Many of the Amhersts around today are said to be 'descended from wild-caught stock', a claim which is at least doubtful for some of them. These, however, are manifestly the genuine article. I was interested to hear that the Great Argus Pheasants here rear their own young, and that the male helps to feed the chicks as do the related Peacock Pheasants.

A species possibly on the way out of the collection, after many years of successful propagation, is the European Turtledove, represented by a lone male; I remember seeing good numbers of Turtles in Paignton's old Sub-tropical House (now demolished) back in the 1990s.

Returning to the 'Wetland' area of the Zoo, the main lake has always been a major feature, with Gibbons on the islands. There are now island groups of Black Howler Monkeys and Emperor Tamarins. Waterfowl include Comb Ducks, numerous free flying Greylag Geese, and smaller numbers of pinioned Bar-headed Geese, with a second pair of Black-necked Swans. Ducks include Ruddy and Common Shelduck, of which some of the latter are free-flying. Not always good 'stayers', they seem well settled here and are particularly attractive on the wing. Sarus Cranes patrol the margins of the lake, and have bred here in the past. The avian 'stars' in this part of the zoo must be the group of Dalmatian Pelicans, which had several nests

on one of the islands. Unfortunately some of their eggs had been stolen by Gibbons.

Promising well for the future is Paignton's second pair of Marabou Storks, the male bred here in 2011 paired to a female bred in Holland. The breeding Marabou Storks have an aviary on the edge of the lake, and Peter Smallbones has written up the achievement in the Magazine. The current trend towards housing storks full-winged in aviaries should lead to more general breeding results. Only the White Stork has ever had much success pinioned in open enclosures.

The lushly planted Reptile Tropics is one of a series of walk-through greenhouses. Here reptiles are confined to glass fronted or floor level enclosures, while birds fly freely. What the visitor sees here depends on the number of people about. Earlier in the day I saw Emerald starlings walking about on the paths, but by the time of our tour, when the place was relatively crowded, they were high in the trees. A corner aviary held a pair of Visayan Tarctic Hornbills. Good numbers of Speckled Mousebirds – obviously a thriving colony – were flying about and hanging from branches in their un-birdlike way. Reptile Tropics is a part of this lovely zoo where one could sit still for hours and see what came into view. The list of species on the wall is considerably longer than one might see on a quick walk through. We saw Pied Imperial Pigeon, Orange Headed Ground Thrush and Hooded Pitta, as well as a self sustaining colony of Black-headed Weavers.

Leaving Reptile Tropics, one enters a smaller, but still lofty, walk-through, with Nicobar Pigeons, Red-crested Touraco and Mountain Witch Doves.

The Desert is another long walk-through glass-house, with appropriate planting, enclosed reptiles and free flying birds based on the same principle as Reptile Tropics. A few years ago this area was graced by a flock of Red-billed Queleas, now sadly dwindled in numbers as breeding fails to keep up with losses. In the absence of further importations – or serious efforts at sustained breeding -- this is one of many species that will disappear from aviculture in the next few years. The colony of Cutthroats appears to be thriving and maintaining numbers well. Hooded Parrakeets have bred here, in an artificial termite mound, and were sitting at the time of our visit. Bourke's and Princess of Wales Parrakeets demonstrated how very beautiful both species can be, in sustained flight which is not possible in the average garden aviary. A single aging Stone Curlew was in evidence, but I did not see any of the Scaled Quail which used to grace the ground area. Both Crested Bronzewing Pigeons – another spectacular flyer with their whistling flight, and entirely appropriate in a desert setting – and Diamond Doves live here. Superb Spreos have recently been added, reflecting their breeding success at Paignton, and a suggestion that they might look good

in here, which they do.

On higher ground at the back of the zoo is the 'Primley', some of which is a relic of earlier times. The 'Cottage' aviary – originally designed to look like an old fashioned country cottage, with garden, traditionally housed small seedeaters in numbers. It now holds Grey Gulls, which co-exist happily with Red-billed Choughs, Palawan Peacock Pheasants and Lapwings. Apparently, and unexpectedly for a gull, they do not take the other birds' eggs. Some fairly traditional aviaries for owls and parrots are large enough for vegetation to survive – not always possible when there are parrot beaks or owl droppings to contend with. The Malay Fish Owls here have so far produced only infertile eggs, but it is hoped they will go on to emulate the Brown Fish Owls that bred here in the 1980s. Among the rarer birds here was a female Eastern White Stork awaiting a partner, and living amicably in a netted-over paddock with a pair of Brown Eared Pheasants. With their digging habits, too many eared pheasant enclosures resemble ploughed fields, and it was good to see these beautiful birds here on grass.

To conclude these notes, I need to mention just a few of the many significant mammals at Paignton. As well as the bachelor group of Western Lowland Gorillas, one of whom recently went to London Zoo to join their three females, we were privileged to see the latest baby Bornean Orangutan, born on 11th April. She was out on one of the islands, hanging on her mother, who supported the baby with one arm, and kept her own body between the new baby and the public. Other mammalian 'stars' here are the veteran African Elephant, apparently quite happy in her spacious quarters despite the loss of an eye, and of her long-time Asian Elephant companion. When she dies she will not be replaced. Much smaller, but very active, and perhaps the only one in the UK, is Paignton's lone Echidna. I remember seeing these in nocturnal houses, relatively somnolent much of the time. This one, housed outside with heat lamps, is usually trundling about.

I am no botanist, but Paignton has been known for its plants since the early days, and they remain a prominent feature – the Swamp Cabbage around the Orang islands is particularly impressive.

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AVICULTURAL SOCIETY SPRING SOCIAL MEETING AT NEWQUAY ZOO

by Nigel Hewston

The second venue on our weekend visit to westcountry collections was Newquay Zoo, where we spent a very interesting morning in the company of Senior Bird Keeper Gary Ward. The zoo is one of a number of leisure attractions situated in a municipal park. Having started many years ago as a privately-owned seasonal tourist attraction, it was later taken over by the local council before being acquired by the Herbert Whitley Trust, which also runs Paignton Zoo and Living Coasts at Torquay.

The zoo is compact, but packs a lot into a small site, with an interesting range of bird and other species, housed in a mixture of modern enclosures and older ones, a number of which have been adapted to good effect to house, and breed, species other than those for which they were built.

Birds are immediately apparent on entry, with a lake which is being developed as an African wetland exhibit. Species here include West African Crowned Crane *Baeurica p.pavonina*, White Storks *Ciconia ciconia* and Comb Ducks *Sarkidiornis m.melanotos*, and is also currently home to Hooded Mergansers *Lophodytes cucullatus*. Continuing the African theme, which also included a new area for hoofstock, was a recently-built aviary housing Napoleon Weavers *Euplectes afer* and Blacksmith Plovers *Vanellus armatus*. Elsewhere and I think uniquely among UK zoos, there is an offshow breeding facility for waxbills, fronted by an aviary exhibit. Results here have been mixed, but the zoo is determined to continue working with difficult species such as Purple Grenadiers *Uraeginthus ianthinogaster*, which are rarely seen in public collections.

Birds from other continents are also well represented, with a large, well planted aviary shared by Black Hornbills *Anthracoceros malayanus* and

Red-billed Blue Magpies *Urocissa erythrorhyncha*, the latter having hatched five chicks on the day of our visit. Nearby, a fine pair of Channel-billed Toucans *Ramphastos vitellinus* occupied another aviary, and had shown signs of breeding behaviour. Parrots in groups are a nice feature of the collection, with Ecuador Amazons *Amazona lilacina*, Scarlet Macaws *Ara macao*, Greater Vasa Parrots *Coracopsis vasa* and Cape Parrots *Poicephalus robustus* all looking good, and mostly in planted enclosures. Bearded Reedlings *Panurus biarmicus* were another unusual exhibit encountered in a small aviary overlooking the children's farm.

The tropical house was a gem, not least because of the number of species breeding in what appeared to be a relatively small free flight area. Blue-crowned Laughingthrush *Dryonastes courtoisi*, Grosbeak Starlings *Scissirostrum dubium*, White-rumped Shamas *Copsychus malabaricus*, Pekin Robins *Leiothrix lutea*, Chestnut-backed Thrushes *Zoothera dohertyi*, Pied Imperial Pigeons *Ducula bicolor* and Roulroul *Rollulus rouloul* all breed successfully. Despite good viewing galleries on two levels, there were species we failed to see in this well-planted exhibit, which also housed the only Hoffmann's two-toed sloth *Choloepus hoffmanni* remaining in the UK. The house also included the zoo's reptile enclosures.

Few of our group had visited the zoo previously, and all left impressed not only with our guide's knowledge and enthusiasm, but with a well laid out and maintained zoo making the most of its site and collection.

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THE SOCIETY'S SUMMER TEA PARTY AT BIRDWORLD BIRD PARK

UK members will already have received an invitation to the society's summer tea party at Birdworld Bird Park, Holt Pound, Nr. Farnham, GU10 4LD on Sunday 22nd June, 2014 from 2.00 – 6.00pm.

There will be a chance to walk around the collection, enjoy tea and a raffle in a marquee, meet old friends, and make new ones. The event has also been publicised to non-members, as we hope it will be an opportunity to introduce new, young members and potential members to the Society, and to show them what we do.

Ticket application details are on the website. www.avisoc.co.uk

RAYMOND SAWYER SCHOLARSHIP

Aims & background

Raymond Sawyer (1924 - 2012) was probably the best-known British aviculturist of his generation. Learning his craft as a young man, he became a very successful exhibitor and later breeder of many difficult species. His large and varied collection and beautifully designed and presented aviaries were an inspiration to many younger aviculturists. He was President of The Avicultural Society from 2007 until his death.

The Avicultural Society would like to ensure that Raymond's legacy continues to inspire young aviculturists and help them to develop their skills. It has therefore established the Raymond Sawyer Scholarship, which will be funded from Raymond's generous bequest to the society. It will support one young birdkeeper each year on one of the excellent avian courses run by the Durrell Conservation Academy at the world famous Durrell Wildlife Park on Jersey, and will be awarded in partnership with The Durrell Wildlife Conservation Trust and Cage & Aviary Birds magazine.

Applications will be open to amateur aviculturists, professional birdkeepers at zoos or other institutions, or aspiring birdkeepers studying animal management with a view to developing a career in aviculture. The Avicultural Society is an international organisation, and applications will be welcome from anywhere in the world. The society is particularly keen to nurture the talents of a younger generation of aviculturists, so the scholarship is open exclusively to applicants under 25 years of age.

Rules

The scholarship will be awarded annually at the discretion of The Avicultural Society.

The scholarship will be awarded to one student under the age of 25 at the time of the course. Application will be open to amateur, professional or student aviculturists living anywhere in the world.

The scholarship will cover course fees and accommodation charges at the Durrell Academy. If the student does not wish to take advantage of accommodation at Durrell, the scholarship will cover course fees only. No payment will be made for travel or other expenses.

The scholarship will include one year's membership of the Avicultural Society.

The scholarship will fund attendance at either the "Conservation Breeding and Husbandry of Birds" course or the "Avian Egg Incubation" workshop at the Durrell Conservation Academy. Should both courses run in the same year, The Avicultural Society will decide which course the scholarship will apply



The late Raymond Sawyer after whom the scholarship is named.

to. Should neither course run, any award for attendance on an alternative course shall be at the discretion of The Avicultural Society.

Applications must be made to Cage & Aviary Birds magazine. The editor will draw up a shortlist of suitable applicants. The successful applicant will be chosen from this list in consultation with representatives of The Durrell Conservation Academy and The Avicultural Society.

Applications must be made on the official application form and must be received by the published closing date. The application form is available to download at www.avisoc.co.uk or www.cageandaviarybirds.co.uk. Please print, complete and return to the address on the form.

BOOK REVIEW

TOUCANS OF THE AMERICAS

Toucans of the Americas (*Tucanos das Americas*) will delight all bird lovers for the clarity and accuracy of the paintings by Eduardo Brettas. Never have I seen such gorgeous illustrations! His fine brush work exactly captures the texture of feathers and every wing covert, the crinkly skin around the eye and even every eye lash.

The text faces the illustration of each species and appears in Portuguese and English. Brazilian author Herculano Alvarenga, who has a degree in medicine and a PhD in Science, has produced a short text (just right) for each species, and an introduction that includes the topics of evolution, distribution and behaviour. This text is superimposed on a background of a green-tinted rainforest photo which makes it a little difficult to read; this is my only criticism of this book. The species text is on a yellow background which is very easy on the eye.

Every species and most sub-species are illustrated against a subtle background of tree branches and leaves and/or berries. I suspect that some people will be tempted to break up the book and frame the illustrations. I normally think of this as a sin but in this case I could forgive them. The page size, 29cm x 33cm, is perfect for this purpose.

The end papers are extremely beautiful. I am tempted to photocopy and frame them. They depict the head and beak of every toucan illustrated. At a glance you can see the incredible array of beauties in this iconic tropical family.

The Index at the beginning is in the form of a miniature version of the big plates (44 in all). This also forms a rapid identification guide. This is an outstanding work and will be treasured by all lovers of toucans and bird art.

Published by M.Pontual. Rio de Janeiro, 2004. Currently available from NHBS for £34.50 plus postage.

Rosemary Low

NEWS & VIEWS

A NEW SPECIES OF TAILORBIRD FROM CAMBODIA

A new species of tailorbird from Cambodia, which remarkably even occurs within the limits of Phnom Penh has been described in an article published early online from the forthcoming issue of *Forktail*, the Journal of Asian Ornithology, published by the Oriental Bird Club.

A team of scientists with the Wildlife Conservation Society, BirdLife International, and other groups have discovered a new species of bird with distinct plumage and a loud call living not in some remote jungle, but in a capital city of 1.5 million people.



James Eaton

The previously undescribed Cambodian Tailorbird *Orthotomus chaktomuk*.

Called the Cambodian Tailorbird *Orthotomus chaktomuk*, the previously undescribed species was found in Cambodia's urbanized capital Phnom Penh and several other locations just outside of the city including a construction site. It is one of only two bird species found solely in Cambodia. The other, the Cambodian Laughingthrush *Garrulax ferrarius*, is restricted to the remote Cardamom Mountains.

The small grey bird with a rufous cap and black throat lives in dense, humid lowland scrub in Phnom Penh and other sites in the floodplain. Its scientific name 'chaktomuk' is an old Khmer word meaning four-faces,

perfectly describing where the bird is found: the area centred on Phnom Penh where the Tonle Sap, Mekong and Bassac Rivers come together.

Only tiny fragments of floodplain scrub remain in Phnom Penh, but larger areas persist just outside the city limits where the Cambodian Tailorbird is abundant. The authors say that the bird's habitat is declining and recommend that the species is classified as Near Threatened under the IUCN's Red List. Agricultural and urban expansion could further affect the bird and its habitat. However, the bird occurs in Baray Bengal Florican Conservation Area, where WCS is working with local communities and the Forestry Administration to protect the Bengal Florican and other threatened birds.

The last two decades have seen a sharp increase in the number of new bird species emerging from Indochina, mostly due to exploration of remote areas. Newly described birds include various babbler species from isolated mountains in Vietnam, the bizarre Bare-faced Bulbul from Lao PDR and the Mekong Wagtail.

Steve Zack, WCS Coordinator of Bird Conservation, said, "Asia contains a spectacular concentration of bird life, but is also under sharply increasing threats ranging from large scale development projects to illegal hunting. Further work is needed to better understand the distribution and ecology of this exciting newly described species to determine its conservation needs."

* * *

MARY ROSE ROWS

June 7, 2014 an epic 90 day journey begins for birds. Mary Rose from Chirping Central Conservation Fund will be rowing almost 3000 miles of the Pacific Ocean as a participant in the Great Pacific Race to raise funds and awareness for bird conservation. Starting out from Monterey Bay, California and rowing to Honolulu, Hawaii, Mary will be rowing solo across the ocean with all funds raised to benefit the most endangered birds on this planet. It is Mary's hope to be able to raise \$1 million to directly benefit on the ground conservation efforts. To see more about this effort please visit www.MaryRows.com where you will be able to experience the journey through video, blog posts and other updates. Chirping Central Conservation Fund is a nonprofit entity and donations may be made via the [MaryRows.com](http://www.MaryRows.com) website. The Fund's request for proposals is also available from this site. Proposals are due May 15 for funding from this race for birds.

* * *

THE AVICULTURAL MAGAZINE VOLUME 120

This issue marks the completion of vol. 119 for 2013. The next magazine you receive, vol. 120 no.1, will have a new look. The most obvious change will be a full colour cover featuring a high quality photograph, though Malcolm Ellis's lovely line drawing of a Bali Mynah will still have a place.

We will also be changing our printing arrangements. This is the last issue to be prepared for printing by Data Publishing Service. For those readers not familiar with DPS, it is actually the business identity of Daniel Shearing, who has been formatting and arranging printing of the magazine for most of the last twenty years. It is Daniel's partnership with Malcolm Ellis, and more recently Martin Greene, that has given us the high-quality magazine we have enjoyed over that period. It would be difficult to imagine anyone with a longer association with The Avicultural Society – not only is Daniel a longstanding member, but his father worked for Alfred Ezra at Foxwarren Park. We are very grateful for Daniel's expertise and hard work for the society over many years.

Giving the magazine a more attractive, interesting and modern exterior is a major step forward and will make it more likely to attract new readers, but we intend to maintain the high quality of content that members are accustomed to. Another important step forward would be to publish the magazine on time, and to help us achieve this, vol. 120 will consist of two issues only. This will enable us to complete vol. 120 by the end of this year, after which we plan to return to the usual four issues per volume. This will inevitably disappoint avid readers of the magazine, but timely publication was one of the main issues raised in responses to the members questionnaire, and this one-off measure seems the only realistic way to achieve this.

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Contributors to Volume 119 - 2013

Barnicoat, F.C A record of the breeding of the Straw-tailed or Fischer's whydah <i>Vidua fischeri</i> in South Africa.....	13
Bavel, Hanne and Franco, Diego Breeding the Amazilia Hummingbird at Walsrode	65
Chartier, Patrick Breeding the Golden-breasted or Royal Starling <i>Cosmopsarus regius</i>	75
Davies, Llŷr Breeding the cape Robin-chat <i>Cossypha caffra</i>	113
Forster, Luke Breeding results in ZSL London Zoo's Blackburn Pavilion -2012	10
Girling, Reuben The Spring Social Meeting to Paradise Park in Cornwall	91
Hewston, Nigel Avicultural Society Spring social meeting at Newquay Zoo	181
Hoppmann, Anne First European breeding success of the Golden-headed Quetzal <i>Pharomachrus auriceps</i> in Weltvogelpark Walsrode.....	25
Hughes, Dr Baz; Jarrett, Nigel; Digby, Roland Headstarting the critically endangered Spoon-billed Sandpiper in Russia, 2013	146
Low, Rosemary Looking back to the 1960s..... Feather damage in African Greys - ground-breaking research	6 136
Toucans of the Americas	185
Marler, Christopher Obituary, Dr Wolfgang Grummt	96

Contributors to Volume 119 - 2013 (cont'd)

Reinschmidt, Dr Matthias

News from Loro Parque Fundación May 2013..... 90

News from Loro Parque Fundación August 2013..... 116

News from Loro Parque Fundación September 2013..... 160

Reinschmidt, Dr Matthias

Half-ripe maize as an important supplementary food for
parrots and parakeets during breeding and rearing 119

Sayers, Bernard

Having been an aviculturist for fifty years: Part 3 3

Having been an aviculturist for fifty years: Part 4 50

Having been an aviculturist for fifty years: Part 5 98

Schofield, Philip

Avicultural Society spring social meeting at Paignton Zoo 177

Sha, John

Breeding and hand-rearing of Black Palm cockatoos

Probosciger aterrimus at the Jurong Bird Park, Singapore 171

Sierra, Miguel; Gallego, Rosana; Fernandez, Maribel

Breeding the Wattled Jacana *Jacana jacana* at Barceloa Zoo 16

Smith, Lucy

Free lofting versus tethering for birds used in demonstrations..... 165

Thurlow, Graham

Keeping and breeding the Mountain Parakeet *Psilopsiagon aurifrons* ... 62

Tonge, Simon; Rugg, Clare; Gregson, Jo

An avicultural review of Living Coasts, Torquay, Devon, UK..... 126

Valuska, Annie; Plasse, Chelle

An accidental experiment on nest and chick recognition
in Taveta Golden Weaver *Ploceus castaneiceps* 122

Waugh, David

Loro Parque Fundación repatriates four more Spix's macaws
to Brazil..... 88

Helping the Golden-Plumed Parakeet..... 163

Index to Volume 119 - 2013

Avicultural Society, visit to Newquay Zoo	181
Avicultural Society, visit to Paignton Zoo	177
Avicultural Society, visit to Paradise Park in Cornwall	91
Book Reviews	
Parrots of Africa, Madagascar and the Mascarene Islands.....	140
The Pursuit of Complexity	35
Toucans of the Americas	185
Chairman's report	2, 49, 97, 145
Cape Robin-chat, breeding at Waddesdon	113
Cockatoo, Black Palm, breeding and hand-rearing, Jurong Bird Park ..	171
<i>Cosmopsarus regius</i> , the breeding of	75
<i>Cossypha caffra</i> , breeding at Waddesdon	113
<i>Eurynorhynchus pygmeus</i> , headstarting the reintroduction	146
Feather damage in African Greys, new research	136
Free lofting versus tethering for birds used in demonstrations.....	165
Golden-Plumed Parakeet, helping the.....	163
Hummingbird, <i>Amazilia</i> , breeding at Walsrode.....	65
<i>Jacana jacana</i> , breeding at Barcelona Zoo.....	16
Jaçana, Wattled, breeding at Barcelona Zoo	16
<i>Leptosittaca branick</i> , helping the	163
Living Coast, Torquay, an avicultural review	126
London Zoo's Blackburn Pavillion 2012.....	10
Looking back to the 1960s.....	6

Index to Volume 119 - 2012 (cont'd)

Loro Parque Fundacion August 2013	116
Loro Parque Fundacion May 2013	90
Loro Parque Fundacion September 2013.....	160
Macaw, Spix's, repatriation by Loro Parque.....	88
Maize as a supplementary rearing food for parrots and parakeets.....	119
News & Views	37, 142, 186
<i>Orthotomus chaktomuk</i> , a new species	186
Obituaries	
Dr Wolfgang Grummt	96
Malcolm Ellis.....	42
Parakeet, Mountain, keeping and breeding of	62
<i>Pharomachrus auriceps</i> , first European breeding at Walsrode.....	25
<i>Probosciger aterrimus</i> , breeding and hand-rearing at Jurong	171
<i>Psilopsiagon aurifrons</i> , the keeping and breeding of	62
Quetzal, Golden-headed, first European breeding at Walsrode	25
Raymond Sawyer scholarship.....	183
reminiscences, having been an aviculturist for fifty years.....	3, 50, 98
Sandpiper, Spoon-billed, headstarting the critically endangered.....	146
Starling, Golden-breasted or Royal, the breeding of	75
Tailorbird, Cambodian, a new species	186
Weavers, Taveta Golden, an experiment on nest and chick recognition	122
Whydah, Straw-tailed or Fischer's, a record of the breeding of.....	13

SOCIETY DONATION TO THE CORNCRAKE PROJECT AT WHIPSNADE ZOO

The society visited Whipsnade Zoo in September for the autumn social meeting and AGM. It was decided to make a donation to the corncrake project. The donation will go towards new incubation equipment for next season.

The corncrake is the only globally threatened bird to breed regularly in the UK. They started to disappear from the English countryside more than a century ago.

Corncrakes are migratory birds that travel from Africa to breed in the UK. They live on land, but are rarely seen in the wild as they live in thick vegetation, grassland and field corners, camouflaged by their brown feathers.

Modern farming techniques, the spread of fast efficient mowers that kill chicks and adults, and now the reduction in cattle numbers, which in turn reduces the need for hay and silage thus drastically reducing potential nesting areas, has hit the corncrake population

In 2002, ZSL, RSPB and Natural England created a partnership for the captive breeding and release of corncrakes. The birds are bred and hand reared by ZSL at ZSL Whipsnade Zoo and then released at the RSPB's Nene Washes nature reserve in Cambridgeshire.

At the beginning of June 2005 a wild male corncrake was heard calling at the nature reserve in Cambridgeshire. It was established that this bird had been bred at Whipsnade in 2004 and is excellent evidence that a captive bred and released, hand-reared bird had migrated to Africa and back (around 3000 miles), ending up less 2-3 km from its original release site.



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CONTENTS

From the Chairman	145
Headstarting the critically endangered Spoon-billed Sandpiper in Russia, 2013 by Roland Digby, Baz Hughes And Nigel Jarrett	146
News from Loro Parque Fundación September 2013 by Dr. Matthias Reinschmidt	160
Helping the Golden-plumed Parakeet by Dr. David Waugh.....	163
Free lofting versus tethering for birds used in demonstrations by Lucy Smith.....	165
Breeding and hand-rearing of Black Palm Cockatoos <i>Probosciger aterrimus</i> at the Jurong Bird Park Singapore by John Sha	171
Avicultural Society Spring Social Meeting at Paignton Zoo by Philip Schofield.....	177
Avicultural Society Spring Social Meeting at Newquay Zoo by Nigel Hewston	181
Raymond Sawyer Scholarship	183
Book Review Toucans of the Americas	185
News & Views	186